

Abstract

The present invention relates to a novel process for removing sidewall residue after dry-etching process. Conventionally, after dry-etching, photoresist and sidewall residues are removed by ozone ashing and hot sulfuric acid. Normally, they are hard to be removed completely. It was found in the present invention that the addition of fluorine-containing compound, preferably hydrogen fluoride and ammonium fluoride, in sulfuric acid results in complete removal of photoresist and sidewall residue without the need for stripper. The process is simple and does not affect the original procedures or the other films on the substrate. The present invention also relates to a novel solution for removing sidewall residue after dry-etching, which comprises sulfuric acid and a fluorine-containing compound, preferably hydrogen fluoride and ammonium fluoride, in the range of from 10:1 to 1000:1 by weight.